

Battery-Operated Wireless-Communication Apparatus and Method

Abstract of the Disclosure

5 A combined battery and wireless-communications apparatus and method. In some
embodiments, the apparatus includes a support, a first conductive layer deposited on a
first surface area of the support, a thin-film battery including a cathode layer, a solid-
state electrolyte layer, and an anode layer deposited such that either the anode layer or
the cathode layer is in electrical contact with the first conductive layer, an antenna
10 mounted to the support structure, and an electronic communications circuit mounted to
the support and electrically coupled to the battery and the antenna to transceive radio
communications. Other embodiments include an energy-receiving device mounted to
the support structure, and an electronic communications circuit mounted to the support
structure and including a recharging circuit, the recharging circuit electrically coupled
15 to the battery and the energy-receiving device to recharge the battery using energy
received by the energy-receiving device.

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